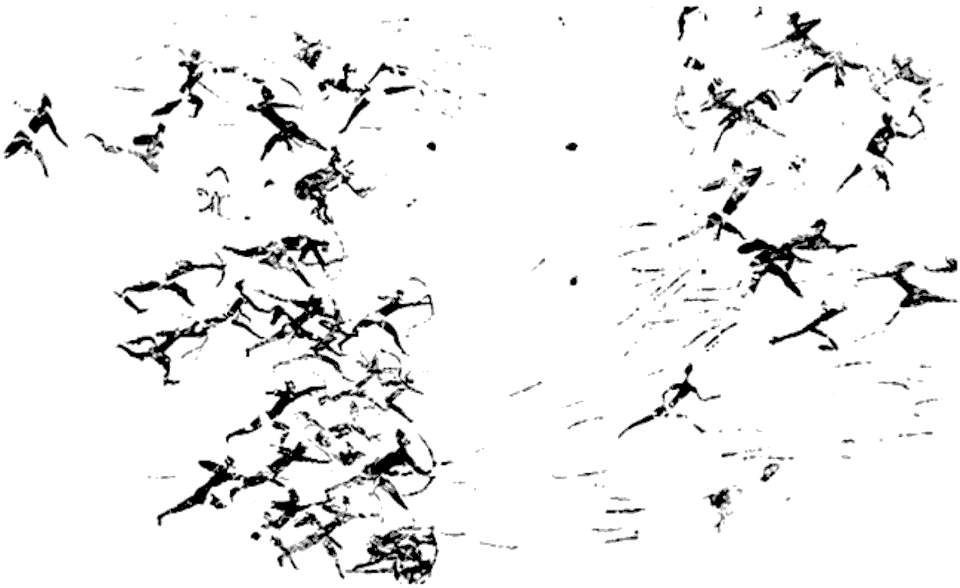
AJĀL آجال

A Quarterly for Ancient Libyan and Afro-asiatic Cultures
Vol. 1, Issue 2 - Summer 2024
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Sefar’s Battle

A rock art scene (5000 BC) from Sefar (Tassili N'Ajjer - Algeria), presents one of the most vivid and dynamic depictions of conflict in prehistoric Sahara. It shows two opposing groups, one of which is more numerous, advancing, and the other retreating. The combatants mostly use bows and arrows, and other less obvious weapons, similar to axes and throwing sticks.

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Cover: Ṯeḥenu sign in the Libyan Stela.

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Editorial Foreword

For interested readers who devote an important part of their time to browsing Ancient History, this pursuit seems to instill a sort of deep confidence, stabilizing their opinions. This is a praiseworthy endeavor in a turbulent world that continues to accelerate unknowingly. In this way, understanding the distant past appears both foundational and aspirational. However, without careful reading, the subject matter may seem loose and nonspecific. Many works, in common parts, are not free of overlap and lack clarity due to differences in the use of terminology and concepts, leading to chaotic texts and conclusions, despite discussing the same events. Let us consider Josephus's criticism of Greek historians: “It is absurd that the Greeks should be so conceited as to think themselves the sole possessors of a knowledge of antiquity and the only accurate reporters of its history. Anyone can easily discover from the historians themselves that their writings have no basis of sure knowledge but merely present the facts as conjectured by individual authors. More often than not, they confute each other in their works, not hesitating to give the most contradictory accounts of the same events.” (Josephus, Against Apion, 1:3.) The situation has not changed much today, although it seems less critical.

Let me use this space in the second issue's foreword to point out some basic terms that are commonly used incorrectly in studies and research.

1. Some researchers use the title “Pharaoh" to refer to the king of ancient Egypt, calling it Pharaonic Egypt, regardless of the period they are studying. However, this title (i.e., Pharaoh) did not appear in Egyptian sources until the sixteenth century BC, during the period of the New Kingdom. Before that, Egyptian scribes of the Old Kingdom used “king,” among other titles, according to the traditions of choosing regnant names. It is therefore appropriate not to generalize the use of the title Pharaoh but rather to limit it to its actual historical time frame.

2. Among the words that some researchers use inaccurately are “Canaanites,” “Phoenicians,” and “Punic.” The Canaanites settled in Palestine, Byblos (Lebanon), and Ugarit (Syria) during the third and second millennia BC. They were known by this name in ancient Egyptian and Assyrian records (Canaan comes from the Sumerian “Kan’an,” i.e., the Land of Sumer, in the Emesal dialect). In the first millennium BC, the Greeks called them Phoenicians, deriving from the Egyptian “Fenḫu.” Later, the Romans referred to the Carthaginians (the Phoenicians and the peoples associated with them in North Africa) as Punic. These three terms indicate three different phases, but there is no reason to continue adopting all of them simultaneously. It is sufficient to refer to the Canaanites until the end of the second millennium and to the Phoenicians starting from the first millennium. Later, the term “Libophoenicians” (Libyphoenicians)

appeared, referring to the ancient inhabitants of North Africa who joined the Phoenicians, contributed to the founding of Carthage and other cities in the western Mediterranean, and were part of the Carthage army and residents of the various cities belonging to Carthage. This domain extends from Sirte in present-day Libya to the Atlantic Ocean. This name was mentioned by ancient historians such as Diodorus of Sicily (20:55:4), Strabo (17:3:19), Pliny (5:24), and Ptolemy (4:3:6). It was also mentioned in the document of King Hannon (Hanno the Navigator), which narrated his periplus behind the Pillars of Hercules to the coasts of the Atlantic Ocean to build new Libophoenician cities. Sometimes the word "Carthaginian" is used instead, such as in "Carthaginian language" or "Carthaginian country," to refer to the Libophoenician language (i.e., the last stage of the Phoenician language in North Africa), or to a Libophoenician city in North Africa or on the Atlantic coast.

3. Among the words that some researchers use inaccurately are "Libyans," "Berbers," and "Amazigh." The ancient Libyans included a number of races. They were different linguistically, ethnically, and geographically. As for the Berbers, they were residents of a large part of ancient Libya, and the term begins chronologically from the tenth century BC. The Amazigh were one tribe among more than 200 other tribes that spoke different dialects of the Berber language. Currently, the Amazigh are speakers of modern Berber dialects that have been reconstructed under the name Tamazight since the last two decades of the twentieth century. Although Tamazight is, in the linguistic classification, a western dialect of the Berber language located between the southern Tachelhit and the northern Tarifit (Riffian).

4. Another example: It is wrong to talk about the Hittites as an ancient Turkic people. We can say ancient Anatolians, referring to Anatolia. As for the Turan Turks, they only knew this part of the world in the twelfth century AD, while the Hittites established their empire in the sixteenth century BC.

5. A final example in this brief: the Persians. Many researchers confuse the periods of the dynastic context in ancient Iran and consider it Persian, even though this word only means the last stage of this context. The Elamites existed from the third millennium BC until the end of the second millennium BC, followed by the Medes in the first half of the first millennium BC (728–550 BC), then the Achaemenids (559–330 BC), then the Sassanians (224–651 AD), and finally the Persians who converted to Islam, as it spread throughout most of Iran by the beginning of the ninth century. The error of generalizing one term, Persians, to pre-Persian dynasties is very common in recent studies of history. It can be seen, for example, when talking about the Persian occupation of Egypt in 525 BC. However, the Persians did not invade Egypt at that time; rather, it was invaded by the Achaemenids, who occupied Egypt for more than 150 years. It was the Achaemenid occupation, not the Persian.

A. Mahjoub

The Berbero-Semitic adjective

Marijn van Putten

Introduction

For a long time it has been noted that the Berber suffix conjugation, used for the PNG marking of qualitative verbs, bears a striking resemblance to the Semitic suffix conjugation, which in East Semitic is used for the conjugation of, mostly, predicative adjectives, and for the general perfect in West Semitic. While the morphological similarities have been observed, a reconstruction of what this construction would have looked like and the morphology of the words to which the suffix conjugation can be attached has not yet received in-depth attention. This article examines the development of what I propose to be a predicative adjective formation in the shared ancestor of Proto-Berber and Proto-Semitic, which I will call Proto-Berbero-Semitic.[1] Moreover, I will examine the morphological formation of adjectival stems in both branches, and show that they have a similar structure that is reconstructible for Proto-Berbero-Semitic.

Semitic makes ample use of deverbal adjectives that convey properties onto the nouns they modify, e.g. Ar. *ǧamalun mayyitun* "a dead camel". This is quite different from Berber which does not have any formal participial formations,[2] and expresses many properties that would be expressed adjectivally in Semitic with verbal relative clauses, especially with the verb in the perfective, which may express stative situations (either generally stative, or resultative) (Kossmann 2012: 79). For example, the Awjili sentence *nəhínət ufánət alúɣəm*

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1. This label should be taken as conventional, and does not explicitly imply that Proto-Berbero-Semitic forms a sub-branch of Afro-Asiatic. The expertise of the author mostly extends to these two branches, and the many morphological parallels appear to make it a fruitful avenue of research to focus on only these two branches of the Afro-Asiatic phylum. Two recent articles concerning Berbero-Semitic, one which discusses the verbal system (Kossmann & Suchard 2018) and the other the feminine endings *-ay and *-āy (Van Putten 2018a) further shows that there is a lot of room for reconstructing quite specific morphology between these two branches.
2. There is a subject relative clause verb form which in the Berberological literature is often referred to as a "participle", but it is simply a finite form of the verb used in subject relative clauses and has no nominal characteristics at all.

yəmmút=a “they found a dead camel” (Van Putten 2014: 157) uses a finite verb *yəmmút=a* (die:PERF:3sm=RES) in an asyndetic relative clause to modify *alúɣəm* “camel”, something that would most naturally be expressed adjectivally in Semitic languages. Some examples of other Berber languages are, for example,

Ghadames

was	*iβrón*	*da=izziyyəz*	*issəffăʕ=dd*	***alaʕwe***	***imməfrən***	***imməẓən***
who	wants	travel	brings.out	cereals	be.chosen:p:3sm	be.divided:p:3sm
i	*măddén*	*nnăs*				
to	people	his				

“who wants to travel brings out supplies of **chosen and divided cereals** to his people”

(Kossmann 2013a: 143)

Tarifiyt

atay	*yəḥman*
tea	be.warm:P:REL

“The warm tea (lit. tea that is warm)” (Kossmann 2013b: 280)

The majority of the verbs in the Berber languages receive a set of affixes very reminiscent of the affixes found in the prefix conjugation of Semitic (Kossmann 2001b: 72; Prasse 1973: 16). These undoubtedly look similar due to their shared ancestry, as already proposed many times before (see Table 1).[1]

In several Berber languages, however, there is a small group of qualitative stative verbs which have a different set of suffixal PNG markers in the perfective stem of the verb, while the other stems have the regular prefix conjugation. This set will be called the Berber suffix conjugation, e.g. Ghadames (Kossmann 2013a: 92) and Kabyle (Naït-Zerrad 1994: 226) and examples are shown in Table 2.

An in-depth discussion of the reconstruction of this suffix conjugation has been undertaken by Kossmann (2009). He argues that this system, along with 1sg. and 2sg. marking, is probably reconstructible for Proto-Berber, even though some languages (specifically Ghomara Berber and Nefusa Berber) do have this suffix conjugation and do not mark for the 1sg. and 2sg.

Several languages point to a 3sg.f. suffix -*yăt* rather than -*ăt*. While I agree with Kossmann (2009) that this may be old, I do not think his reconstruction *-*yăt* for sg.f. and *-*ăt* for the plural is justified. Kossmann assumes that the *-*it* ending found in the plural is etymologically identical to the *-*yăt* ending, but several dialects that have the plural -*it*, e.g. Ghadames, would not have that as the regular outcome of *-*yăt*. It seems to me therefore better to reconstruct a system which perhaps had variation in the 3sg.f. and pl., rather than a system where the two were conflated. What exactly the origin is of the variation of

1. For treatments of the prefix conjugation, see Prasse (1973: 15–7) and Rössler (1950: 483f.).

these two allomorphs is currently unclear. A possible reconstruction of the suffix conjugation is given in Table 3.

Table 1. The prefix conjugation in Berber and Semitic

1sg.	*(*-əɣ)*[1]	* ʔ-
2sg.	**t-…(-əd)*	**t-*(fem. …-*ī*)
3sg.m.	**y-*	**y-*
3sg.f.	**t-*	**t-*
1pl.	**n-*	**n-*
2pl.m.	**t-…-ăm*	**t-…-ū*
3pl.f.	**-năt*	**t-…-na*[2]

Table 2. The perfective suffix in some Berber languages

	Ghadames *əmtit* "to be small"	Kabyle *imlul* "to be white"
1sg.	*măttit-ăʕ*	*məllul-əɣ*
2sg.	*măttit-ət*	*məllul-əḏ*
3sg.m.	*măttit*	*məllul*
3sg.f.	*măttit-ăt*	*məllul-ət*
1/2/3pl.	*măttit-it*	*məllul-ṯ*

The morphological similarities between the predicative adjective endings of Semitic and those of stative verbs in Berber have long been recognized (e.g. Rössler 1950: 481; Cohen 1984: 111). I consider this comparison to be compelling and therefore follow previous researchers who consider these two suffix conjugations to have a single common ancestral system. However, the exact development and relation of Berber stems that take this suffix conjugation to the Semitic adjectives and the stem formations associated with them have not yet been fully mapped out. In this article I will map out this development, by examining and comparing the stem formation in Proto-Berber and Proto-Semitic, and will propose a development from Berbero-Semitic adjectival stems that yields the systems of qualitative verbs/adjectives[3] as we find them in the two language families.

[1]. The 1sg. and 2sg. suffixes are absent in the Future stem in Ghadames; this is most likely an archaism and traces of it are found elsewhere too (Kossmann 2000: 238).

[2]. For the reconstruction of this form with the prefix *tv- rather than *yv-, see Suchard (2016: 58).

Table 3. The Proto-Berber and Proto-Semitic suffix conjugations

	Proto-Berber	Proto-Semitic
1sg.	*-əɣ	*-(ā)ku
2sg.	*-əd (or *əḍ)	m. *-(ā)ta; f. *-(ā)ti
3sg.m.	*-ø	*-a
3sg.f.	*-(y)ăt	*-at
1pl.	*-it~ət	*-(ā)nā
2pl.m.	*-it~ət	m. *-(ā)tum(u) f. *-(ā)tin
3pl.f.	*-it~ət	m. *-ū[1] f. *-ā

This article deals with several essential distinctions in nominal and verbal semantics. To aid the discussion, several terms need to be discussed. When speaking of verbs we may distinguish between stative and dynamic verbs. Stative verbs describe a state of being, while dynamic verbs (also called fientive verbs) describe a process. Semantically both can be intransitive and transitive, although stative verbs are usually intransitive. Huehnergard (1987: 225), using Akkadian examples, uses the terms stative (= stative, intransitive), intransitive (= dynamic, intransitive) and transitive (= dynamic, transitive) and supplies terms for the resulting adjectival meanings relating to these verbs:

stative *damāqum* "to be(come) good" descriptive: *damqam* "good"

intransitive *wašābum* "to sit (down)" resultative: *wašbum* "seated"

transitive *ṣabātum* "to seize" passive: *ṣabtum* "seized"

For the purposes of this article, these distinctions are essential, but the terminology will be modified somewhat. As Kouwenberg (2010: 54ff.) points out, thinking of Semitic verbs (and this is true for Berber verbs too) as inherently dynamic and stative is not very productive because the contrast is grammaticalized, and any verb can express both dynamic or static situations. In Akkadian, this is done by the prefix conjugation (dynamic events) and the verbal adjective (stative events). For Berber, dynamic events are expressed by the aorist and imperfective stems (with different aspectual nuances) whereas the stative is expressed by the perfective stem of the verb. Dynamic events in the past may also be expressed by the perfective in most varieties of Berber. There are, however, some varieties of Berber that distinguish a resultative (stative) from the perfective (dynamic), e.g. Tuareg (Kossmann 2011: 144) and Awjila Berber (Van Putten 2014: 151f.).

[1] Kouwenberg (2010: 192) suggests that Proto-Berber *-it may be in some way related to the Akkadian attributive adjective masculine plural -ūt-.

Kouwenberg observes, following Aro (1964: 7–10), that stative and dynamic are on two poles of a spectrum, where some verbs are more stative and others are more dynamic. It often comes down to interpretation whether a verb is to be considered primarily "stative" or primarily "dynamic". *Wašābum* could be seen as meaning the stative "to sit", in which case wašbum would describe the state "sitting", or as the dynamic "to sit down", in which case the verbal adjective would rather have a resultative meaning "seated".

Kouwenberg (2010: 58f.) distinguishes a group of verbs – which basically coincide with Huehnergard's stative verbs – which he calls "adjectival verbs". Adjectival verbs are typically not stative in the prefix conjugation, as their verbal paradigm denotes a process (usually ingressive) while it is the adjective itself that expresses the "stative". Kouwenberg gives several criteria that allow one to distinguish adjectival verbs from prototypical fientive verbs. For example, adjectival verbs do not have a present participle, and their verbal adjective has a lexically determined vowel in the second syllable as this is the primary form from which the rest of the verbal paradigm is derived. A final useful criterion is a semantic one. Kouwenberg (2010: 59) states that "a verb is more positively adjectival as the corresponding adjective denotes a more stable, inherent or permanent property".

With these points in mind it is clear that the terminology needs to be adjusted slightly, although Huehnergard's triadic distinction is ultimately useful for the current discussion as the semantic distinction between qualitative (Huehnergard's stative) and intransitive verbs and their relative adjectives mark a morphological difference in Berber. Kouwenberg's adjectival verbs will be called "qualitative verbs", and their corresponding adjectives "qualitative adjectives". Intransitive verbs, which may be more dynamic or stative, will continue to be called intransitive verbs, but the corresponding adjective will be called the "resultative adjective", while recognizing that in reality the state expressed by this adjective may be purely stative rather than resultative in nature. Finally, the transitive verbs, which are very often dynamic in nature, will continue to be called that, and I will also continue to call the corresponding adjective the passive adjective, which expresses the resulting state of being the object rather than the subject of the transitive verb. Table 4 summarizes the terminology used here.

Table 4. Terminology of verbs and adjectives

Verb	Adjective
Qualitative verb: *damāqum* "to be(come) good"	Qualitative adjective: *damqum* "good"
Intransitive verb: *wašābum* "to sit (down"	Resultative adjective: *wašbum* "seated"
Transitive verb: *ṣabātum* "to seize"	Passive adjective: *ṣabtum* "seized"

Berber qualitative verbs and the qualitative adjective

Most varieties of Berber distinguish a class of qualitative verbs. When the variety has a suffix conjugation, it is only the perfective stem (and not the aorist and imperfective stems) that takes the suffix conjugation. Different from other verbal types, these perfective stems cannot be predictably derived from their aorist form. I will call this unpredictable perfective stem the "qualitative perfective" here. In varieties where such qualitative verbs occur, these qualitative verbs generally form a subset of a verb type with mostly intransitive verbs which in Tuareg, Kabyle and Tashlhiyt are recognized by a stem-initial vowel **i* or **u* in the aorist and imperfective stems.[1] This larger set of stative verbs does have a predictable perfective stem and this perfective stem takes the prefix conjugation. This system is demonstrated for Tuareg in Table 5. A dash before the stem indicates that the stem takes the prefix conjugation, while a dash behind it indicates that it takes the suffix conjugation.

Not all languages that have the qualitative perfective have also retained the suffix conjugation. Tashlhiyt and Central Moroccan Berber, for example, use the unpredictable stems of the qualitative perfective, but simply supply it with the prefix conjugation; nevertheless such forms clearly retain their unpredictable perfective formation compared to the aorist across these dialects.

Due to the loss of short vowels in open syllables and the neutralization between **ă* and **ə*, the perfective stative verb stem*-ăCCiC and *CăCiC- merge to CCiC in a large number of dialects. In dialects that do not retain the suffix conjugation the distinction is thus lost completely, but in those that retain it, the suffix conjugation still marks the distinction. The follow section provides an overview of the different relevant dialects that retain such qualitative verb formations. The dash before or after the stem marks whether it takes the regular (prefix) conjugation or the suffix conjugation.

Tashlhiyt retains much the same system as Tuareg, with the difference that the perfective stem has become a prefix conjugation. As a result forms like A -*isdid* P -*sdid* "be slim" < A *-*isdid* P **sădid*- and A -*idrus* P -*drus* "be few" < A *-idrus P **dărus*- have become morphologically indistinguishable from the stative verbs where the perfective can be regularly derived from the aorist, e.g. A -*iksuḍ* P -*ksuḍ* < A *-*iksuḍ* P *-*ăksuḍ*. But for most verbs the difference in vowel and consonant length still clearly sets them apart from this verb type. Table 6 gives an overview (Sudlow 2021: 96–7).

Central Moroccan Berber is similar to Tashlhiyt in this regard, except that it lacks the typical initial i vowel in the aorist (Penchoen 1973: 53; Oussikoum 2013: 423, 742). Due to this missing initial vowel, the aorist and perfective of *sdid* and *drus* have merged completely. Table 7 provides an overview.

Kabyle retains similar forms to that which we find in Tashlhiyt and Central

1. The qualitative verbs correspond to Prasse's Cj. IV, whereas the subset of regular stative verbs correspond to Prasse's Cj.II (Prasse 1973: 145–61, 181–98).

Moroccan Berber, with the difference, however, that Kabyle does retain a suffix conjugation, and thus does not fully merge the **dărus-* with **-ăksuḍ* type (Naït-Zerrad 1994: 217–27; Dallet 1982: s.v.). An overview is given in Table 8.

Ghadames retains the suffix conjugation, and has a good number of adjectival verbs of this type. In some cases the aorist has shortened both its stem vowels, and in others only the first one. It is not clear what causes these shortenings (Kossmann 2013a: 75). Examples are given in Table 9.

Table 5. Intransitive and qualitative verbs in Tuareg

Aorist	**Imperfective**	**Perfective**	
|-iCCaC|[1]	|-t-iCCaC|	|-ăCCiC|	
-isnan	*-t-isnan*	*-ăsnin*	"be in pain"
-irhan	*-t-irhan*	*-ărhin*	"be sick"
The qualitative subtype			
Aorist	**Imperfective**	**Perfective**	
|-iCCaC|	|-t-iCCaC|	*Variable*	
-isdad	*-t-isdad*	*sădid-*	"be thin"
-idras	*-t-idras*	*dărus-*	"be few"
-irkam	*-t-irkam*	*rəkkəm*	"be feeble"
-ilmaḍ	*-t-ilmaḍ*	*lămmeḍ*	"be soft"

Table 6. Qualitative verbs in Tashlhiyt

Aorist	**Perfective**	
-isdid	*-sdid*	"be slim, thin"
-idrus	*-drus*	"be few"
-iwriɣ	*-urraɣ*	"be yellow"
-ismiḍ	*-smmiḍ*	"be cold"
-imlul	*-mllul*	"be white"
-iwsir	*-ussr*	"be old"

[1]. The vowel a in the aorist and imperfective appears to be an innovation unique to Tuareg. Other Berber varieties usually have an i vowel here: Kb. isnin impf. ţţisnin; Tashl. isnin impf. ttisnin; MA snin impf. ttəsnin.

Table 7. Qualitative verbs in Central Moroccan Berber

Aorist	Perfective	
-zwuɣ	*-zəggʷaɣ*	“be red”
-smiḍ	*-səmmiḍ*	“be cold”
-imlul	*-məllul*	“be white”
-sdid	*-sdid*	“be slim”
-drus	*-drus*	“be few”

Table 8. Qualitative verbs in Kabyle Berber

Aorist	Perfective	
-izwiɣ	*zəggʷaɣ-*	“be red”
-ismiḍ	*səmməḍ-*	“be cold”
-imlul	*məllul-*	“be white”
-imɣur	*məqqʷər-*	“be big”
-iṣḍif	*ṣḏif-/ṣəṭṭaf-*	“be black”
-udrus	*ḏrus-*	“be few”

Table 9. Qualitative verbs in Gahames Berber

Aorist	Perfective	
-əzḍəf	*săṭṭăf-*	“be black”
-əmləl	*mălləl-* pl. *măllul-it*	“be white”
-əmtit	*măttit-*	“be small”
-əmqor	*Măqqor-*	“be big”
-əsdid	*sădid-*	“be thin”

The unpredictability of the stem shape, and difference in conjugation between the aorist and perfective in some of the varieties discussed above, suggest a merger of multiple paradigms into a single verbal paradigm. Zenaga Berber appears to retain an earlier situation where such qualitative verbs still had an independent perfective. Taine-Cheikh (2003) convincingly shows that for Zenaga, the etymological equivalent of the qualitative perfective stem, which like other Berber languages takes the suffix conjugation, is not part of the associated verbal paradigm, and should instead be considered a separate qualitative

adjective formation. The perfective stem found in Zenaga corresponds perfectly to the *|ăCCiC| pattern that we find in regular stative verbs in Tuareg. This can be clearly seen with the cognate of the Tuareg verb isdad "to be thin" in Zenaga Berber,[1] shown in Table 10.

Table 10. Qualitative verbs and adjectives in Zenaga Berber

Aorist	Imperfective	Perfective	
-əšti̠ḏ	*-ittištəḏ*	*-ästəḏ*[2]	"be come light"
-irhan	*-t-irhan*	*-ărhin*	"be sick"
		Adjective	
		šäḏəḏ-	"light; be light"

I agree with Galand (1980; 1990) that this distribution, where this qualitative adjective was not reanalysed as the perfective, is the original situation, and that such suffix conjugation stems seem to form archaic adjectival stems that could be followed by predictive suffixes. This situation appears to not only be retained in Zenaga Berber, but also in the eastern Kabyle variety of At Ziyan, where one finds *i-zwiɣ* "it/he has become red" contrasting with *zeggaɣ-it* "it/he is red" (Galand 1990; Achab 2006: 67, 65). This further reinforces that the Zenaga situation is a retention rather than an innovation.[3] The Zenaga/At Ziyan situation therefore confirms that the qualitative perfectives of Tuareg, Kabyle, Tashlhiyt and Central Moroccan Berber were originally qualitative adjectives that took a special predicative suffix conjugation, which only later were incorporated into a verbal system. From the above discussion it therefore seems possible to reconstruct a Proto-Berber situation, where the qualitative verb had three regular verbal stem forms which were identical to this subclass of intransitive verbs (Prasse's Cj. II); besides that, the same root would have an adjective stem that could be followed by the predicative suffix conjugation.

Nominalized forms of these qualitative adjective stems that take the regular nominal prefixes of Berber are fairly well attested as well, and may be reconstructed for Proto-Berber as representing "nominalized adjectives", e.g. Central Moroccan Berber a-wṛaɣ f. ta-wṛaɣ-t "yellow" besides the verb aor. -wṛiɣ (< *-

1. Zenaga Berber loses the distinction between plain and short central vowels, merging *ă and *a > /a/ and *i, *u, *e and *ə > /ə/ (Kossmann 2001a).

2. The t in this stem is the result of progressive voicing assimilation; **išdiḏ* > *əštiḏ.*

3. Note also that while Awjili retains the suffix conjugation on adjectival verbs of this type, there is not much evidence that they never became regularly incorporated into the verbal system as perfectives of stative verbs (Van Putten 2014: 97–9). A similar situation obtains, it would seem, in Ghomara Berber (Mourigh 2016: 175–6).

iwriɣ) impf. -ttwṛiɣ; perf. -wṛaɣ "be/become yellow". This would seem to further confirm that such qualitative adjective stems are in some way nominal in nature.

Nominalized adjectives can be used attributively in a number of Berber languages (e.g. Figuig *asəlham awṛaɣ* "a yellow burnous"), but such a function is almost completely absent in others, where relative clauses with the qualitative verbs are preferred instead (e.g. Tashelhiyt, Tuareg). It seems possible that nominalized adjectives did not have an attributive function in Proto-Berber, but were purely nominal (e.g. **a-wăraɣ* "the yellow one"). If this is the case, then it is likely that attribution was expressed much as in Tuareg with relative clauses using the qualitative adjectives with the suffix conjugation (e.g. **a-sălsuʔ wa wăraɣ-ăn* "the yellow garment", litt. "the garment which is yellow"). However, an ultimate resolution of this question is outside the scope of this article (but see Galand 1990 and Chaker 1985 for discussions). A reconstruction of the Proto-Berber qualitative verbs and adjectives is provided in Table 11.

Table 11. Proto-Berber qualitative verbs and adjectives

Qualitative verbs:	aor. **-iwriɣ;* impf. **-ətt-iwriɣ;* pf. **-ăwriɣ* "to be(come) yellow"
Qualitative adjectives:	**wăraɣ-* "yellow; be yellow"
Nominalized adjective:	m.**a-wăraɣ* f. **ta-wăraɣ-t*; m.pl. **i-wăraɣ-ăn* f.pl. **ti-wăraɣ-en* "yellow"

The Berber qualitative adjectival stems

In the above section I have argued that the qualitative perfective is originally part of a system of qualitative adjective stems, rather than being part of the verbal system. There are a variety of stems associated with the qualitative adjective, all of which share a vowel **ă* after the first root consonant. The second root consonant may or may not be geminated, and the vowel after the second root consonant may be **i*, **u*, **a* and perhaps also a central high vowel **ə*. These stems are lexically determined, and there is no obvious link between the semantics and the formations. Below I give an overview of several well-attested qualitative adjectives reconstructible for Proto-Berber.[1] Words placed between tween brackets are words of the same root, but with a different formation:

CăCaC **wăraɣ* "yellow",[2] c.f. Tu. *ăraɣ*;[3] zng. *yaraʔ*; CMB *warɣ*; Fig. *a-wṛaɣ* (kb. *wəṛṛaɣ*; *wəṛṛaɣ*; Ghd. arăɣ)

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1. The abbreviations stand for the following varieties, and the dictionaries used for them: Awjila Berber, Awj. (Van Putten 2014); Figuig Berber, Fig. (Benamara 2013); Ghadames Berber, Ghd. (Lanfry 1973); Kabyle Berber, Kb. (Dallet 1982); Central Moroccan Berber, CMB (Taifi 1992); Mali Tuareg, Tu. (Heath 2006); Zénaga Berber, Zng. (Taine-Cheikh 2008).

2. The connection between this root **wrɣ* "yellow" and the Semitic root **wrḳ* "yellow/green, leaves" leaves" has long been recognized (e.g. Rössler 1952: 132), and seems very attractive, cf. also Gz *warq* "gold", Ug *yrq* "id." and Proto-Berber **urəɣ* "id." (< **a-wŭrŭɣ* ?).

3. This verb seems to confirm that Tuareg underwent the loss of word-initial **w*. This explains why the prefix of the annexed state is *ă-* in Tuareg, while the rest of the Berber languages with state distinction have *wə-* pointing to **wă-*.

CăCiC **sădid* "thin", cf. Tu. *Sădid*; Zng. *šäḏəḏ*; Ghd. *Sădid*; CMB *sḏiḏ*

CăCuC **dărus* "few", Tu. *dărus, dərus*; CMB *ḏrus*; Tashl. *Drus*; kb. *ḏrus*; Awj. *Dərúš*, Zng. *ḏärīš* [1]

**făsus* "light", Tu. *făsus, fəsus*; Awj. *Fəšúš*; (MA *fəssus*; kb. *fəssus*)

CăC:aC **zăggʷaɣ* "red", Tu. *šaggaɣ*; *zaggaɣ*; Kb. *zəggʷaɣ*; CMB *zəggʷaɣ*; Zng. *ẕoḅḅäʔ*
**săṭṭaf* "black", cf. Ghd, *săṭṭăf*; Kb. *ṣəṭṭaf*; (Tu. *uẓẓaf* "to be, become black"; *tasăṭṭaft* "a dark colour")

CăC:iC **sămmiḍ* "cold", cf. Tu. *sămmeḍ*; Zng. *šäṃṃuḏ*; CMB *səmiḏ*; Kb. (*səmməḏ*) but *a-səmmiḏ* Ghd. *sămmeḍʔ* [2]
**zăddig* "clean", cf. Tu. *šăddiğ*; Kb. *zəddiḡ*

CăC:uC **măllul* "white", cf. Tu. *măllul*; Ghd. *Mălləl*, pl. *măllul-it*; Zng. *Mälliy*; MA *məllul*; Kb. Məllul
**maqqur* "big", Tu. *măqqăr* pl. *măqqornen*; Ghd. *măqqor*; CMB *məqqur*;)Kb. *məqqwəṛ*)
**găzzul* "short", Tu. *găzzul* (*gəzzel*); CMB *ḡəzzul*
**sămmum* "bitter", CMB *səmmum*; (Zng. *šäṃuṃ*)

CăCəCʔ **sămǝm* "bitter", Tu. *səməm*; Zng. *šäṃuṃ* (see below)
CăC:əCʔ **găzzəl* "short", Tu. *ğəzzəl* (see below)

The pattern *CăCəC for qualitative adjectival stems is rare in Berber. The only example I have identified that might be reconstructible for Proto-Berber is **săməm* "bitter; sour; acrid", whose reflex is found in Tuareg *səməm*[3] and Zenaga *šäṃuṃ* /*šaṃəṃ*/. However, these forms generally show dialectal variation with the long vowels. This might suggest that this goes back to an original **sămum*, which was shortened in these dialects for some unknown reason. Variation in length is also found in several *CăC:əC stems:

mğqqăr (< **măqqer* ?), *măqqor* "big"
ğəzzəl, *ğăzzul* "short"
məẓẓəğ, *məẓẓağ* "deaf"

There is some evidence in several Berber varieties that these long and short stems originate from a single paradigm which alternated between a short stem in the singular and a long stem in the plural. Awjila Berber has short/long alternations for all verbs with a geminated second radical (except *zə́ wwəɣ* pl. *zəwɣ-ít* "red") (Van Putten 2014: 97):

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[1]. long vowel in the Zenaga form is unexplained. Several other adjectives that have to do with smallness appear to have this long vowel, cf. *käyīy* "short" and *maẓẓūg* "small". This might suggest that this is a sound symbolic expressive formation (Souag 2023: 22).

[2]. This may be a stem shape CaC̄i/uC, or it has a shortened final vowel. Its plural does not have a lengthened vowel. See the discussion below.

3. Tuareg undergoes regressive vowel harmony, any **ă* that precedes a **ə* is shifted to ə also (Kossmann 2011: 22); the original initial vowel **ă* is confirmed by the Zenaga cognate.

gə́zzəl pl. *gəzzil-ít* “short”
ɣə́zzəf pl. *ɣəzzif-ít* “long”
lə́qqəq pl. *ləqqiq-ít* “thin”
məllə́l pl. *məllíl-it* “white”[18]
məššə́k pl. *məššik-ít* “small”[1]
šə́ṭṭəf pl. *šəttif-ít* “black”
zə́wwər pl. *zəwwir-ít* “large”
mə́qqər pl. *məqqayr-ít* (= /məqqir-ít/?) “big”

Similar behaviour is found in one verb in Ghadames (Kossmann 2013a: 75): *măllǝl* pl. *măllul-it* “be white”. *Săṭṭăf* “be black” and *ğăzzəl* “be short” always have short vowels, whereas *măttit* “be small” and *măqqor* “be big” always have long vowels. Such allomorphy of the adjective stem is found likewise in a number of verbs in Tuareg (Prasse et al. 1998: 438): *wăššăr* pl. *wăššar-a* “be old”, *rəssəḍ* pl. *răssoḍ-a* “be rotten, foul-smelling”, as well as in a number of zenatic dialects from the Atlas mountains which retain a suffix conjugation such as Ighezran 3sg.m. *məlləl* 3pl.m. *məllul-t* “be white” and 3sg.m. *məqqʷər* 3pl.m. *məqqur-t* “be big” (Roux 1935: 73–5). While this pattern is marginal, the fact that it is widespread confirms that it must be archaic.

This situation could be interpreted as showing that *CăCəC and *CăC:əC stems indeed existed, but that these stems underwent lengthening of the final vowel in the plural.[2] Due to this allomorphy, many languages levelled the lengthened stem, merging it with the long vowel classes already discussed. Alternatively, perhaps the shortened stems are original for all the singular stems, and many languages have simply levelled out the allomorphy over time.

To sum up, the qualitative adjective stems reconstructible for Proto-Berber are given in Table 12. Notice that there is no sign of the short vowel equivalents of the *CăCaC and *CăC:aC stems.

Table 12. The qualitative adjectives stems of Proto-Berber

*CăCəC	*CăC:əC?	*CăCiC	*CăC:iC
		*CăCuC	*CăC:uC
–	–	*CăCaC	*CăC:aC

The Semitic qualitative adjective

Semitic has a suffix conjugation that, at least in the singular, looks similar to the Berber system. However, the Semitic use of this suffix conjugation is quite different from the Berber because of its highly productive system of verbal adjec-

1. It is unclear why there is a difference in stress pattern in this adjective compared to the others in Awjila Berber.
2. A similar lengthening in the plural is found in the verbal noun formation of heavy verbs; this is regular in Tuareg, e.g. *a-səlməd* pl. *i-səlmid-ăn* “teaching”, *a-dubən* pl. *i-dubun-ăn* “marrying”.

tives that eventually gives rise to the West Semitic perfect system (Hetzron 1976: 104f.). Such verbal adjectives are completely absent in Berber.

The available verbal adjectives in the basic stem in Akkadian are CaCiC (e.g. *damiq*- "good"), CaCuC (e.g. *zapur*- "malicious") and CaCaC (e.g. *rapaš*- "wide"), where the first is by far the most common, being used as the regular equivalent of transitive and intransitive verbs; the other two are lexically determined for qualitative verbs (Huehnergard 2011: 25f.). This system essentially allows Semitic to productively form new deverbal adjectives.

Besides this regular deverbal CaCiC formation, however, there are also many adjectival formations – likewise with an **a* after the first root consonant – which should be considered proper non-derivational qualitative adjectives, such as the CaCīC and CaCūC formations that are rather productive in West Semitic. Such qualitative adjectives stand in a relationship to inchoative verbs of the same root in a rather looser and less strictly deverbal relation, in much the same way as the qualitative adjectives in Proto-Berber,[1] e.g. Akkadian *arrakum* "very long", *šakkŭ̄ru* "drunken" (Fox 2003: 255, 271). In several such non-productive adjectival formations of verbs that are qualitative in nature, such as Akkadian *šakārum* "to be(come) drunk", it seems likely that the adjective *šakkŭ̄ru* is the primary adjectival formation, from which an inchoative deadjectival verb form was derived. This is similar to the situation that we find in Proto-Berber, where an originally lexically determined adjectival formation was incorporated in the verbal system of an intransitive verb type.

A notable difference between the qualitative adjectives of Semitic and Berber, however, is that in Semitic such forms clearly and unproblematically function as nouns, which take nominal cases vowels, and can be used as attributive adjectives by postposing them to a governing noun. Whether such nominalized functions existed for Berber is less clear. These qualitative adjectives may also be followed by the predicative affixes to turn them into predicate phrases, and in this regard Berber clearly parallels the Semitic formations.

The Semitic qualitative adjective stems As in Berber, Semitic has access to a variety of qualitative adjective formations, many of which follow the same basic pattern: **CaC(:)V̄/V̆C*. In the following section, I will examine the evidence for qualitative adjectival formations in Semitic using Fox's (2003) discussion of these different formations and I will show that morphologically they coincide quite clearly with the qualitative adjective stems that we find in Proto-Berber. As deverbal derivation of adjectival forms is highly productive in Semitic, many of these stems perform other functions besides the qualitative adjective meaning. For an in-depth discussion of these functions I refer the reader to Fox (2003) – in the following I will only cite forms that establish that qualitative adjectival meanings exist for said stem.

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1. But, as we will see, some of these non-derivational adjectival formations such as CaCīC and CaCūC later also become productive as derivational categories in West Semitic.

CaCāC

This pattern is often associated with qualitative adjectives (Fox 2003: 179), e.g. Ar. *barāʔ* "free", *šaǧāʕ* "brave";[1] Hebr. *qådoš* "holy", *qårob* "near". In Gəʕəz it is the regular feminine counterpart to the masculine CaCīC adjectives (Fox 2003: 183): *ʕăbiy* f. *ʕăbay* "great", *ṭăbib* f. *ṭăbab* "wise". Syriac has a few qualitative forms as well (Fox 2003: 186), e.g. *dwāḏ* "insane", *gḇāḥ* "bald".[2] CaCāC appears to be unattested in East Semitic.

CaCīC

This pattern is especially productive in Arabic for creating qualitative adjectives (*kabīr* "big", *qarīb* "near" etc.). While not productive in Hebrew, there are several clear examples of it with a qualitative meaning, e.g. *nåʕim* "pleasant", *ḥåsiḏ* "pious". Gəʕəz, likewise, retains several qualitative adjectives of this pattern, e.g. *gäzif* "thick", *märir* "bitter", *qäṭin* "thin". In Aramaic CaCīC is the regular formation of the passive adjective, but some qualitative adjectives exist, e.g. *ḥṯir* "proud", *sḇiʕ* "full, satiated". Despite the widespread attestation of this pattern in all of West Semitic, there appears to be no trace of this pattern in Akkadian (Fox 2003: 188).[3]

CaCūC

This pattern is well attested in Semitic, and besides passive participial meaning has quite a few qualitative adjectives associated with it as well, e.g. Hebr. *ʕåṣum* "mighty" and Gəʕəz *qərub* "near", Ar. *ḍaʕūf* "weak", *samūl* "old, worn out", *waqūr* "calm", *sakūt* "constantly silent".

CaC:āC/CaC:aC

The pattern *CaC:āC seems difficult to reconstruct with a qualitative adjectival meaning, although there are clear cases in Gəʕəz, e.g. *näwwaḫ* "high, long", *nädday* "poor", *färrah* "fearful", *bähham* "mute", *ḫäyyal* "strong" and Syriac *zakkāy* "pure, victorious", *ḥawwār* "greedy" (Fox 2003: 253). In Akkadian CaC:aC apparently denotes adjectives, while CaC:āC denotes nouns and subs-

1. Šuǧāʕ, however, is the more common vocalism, but šaǧāʕ is reported in classical lexicons (Lane 1863: 1508b).
2. Fox (2003: 184) states that "a few [Hebrew] *qatul adjectives have completely merged, by analogy, with *qatāl, so that vowel reduction does not occur, for example in the construct plural qətôlê". As Suchard (2016: 71f.) points out, CaCāC adjectives are attested with similar semantics in Arabic and Gəʕəz, so there is no obvious reason to prefer a reconstruction with the pattern CaCuC for these adjectives.
3. Huehnergard (2006: 10) suggests that the proliferation of this pattern in West Semitic is the result of the phonotactics of Semitic. As Semitic does not allow superheavy syllables, the feminine attributive adjective *CaCiC-t could either be the feminine counterpart of *CaCiC or *CaCīC adjectival stems. This ambiguity gave rise to the analogical proliferation of *CaCīC stems in West-Semitic. Of course, this reasoning can also be reversed. It may be that Akkadian simply got rid of all *CaCīC stems, replacing them with *CaCiC stems by analogy of the feminine form where they were neutralized. Whatever explanation one takes, it seems unlikely that either *CaCīC or *CaCiC would have developed from a situation where one or the other stem did not exist at all. There is therefore little reason to assume that *CaCīC is entirely innovative in West Semitic.

tantives (Fox 2003: 254, citing Von Soden 1969: 61f.). Fox points out that there are not many environments where the vowel length is expressed so that this distribution is not necessarily confirmed with the greatest clarity. Adjectives in Akkadian seem to have an intensive or iterative meaning: *arrakum* "very long", *ṣeḫḫerum* "very small", *qattanum* "very small". Hebrew shows several qualitative adjectives from a CaC:aC pattern, e.g. *dawwåy* "sick", *ḥallåš* "weak". The regular reflex of CaC:āC is very rare in Hebrew, also as a nominal form. Despite the presence of this formation as a qualitative adjective in disparate branches like Syriac and Gəʕəz, its absence in most other branches makes it difficult to establish as a qualitative adjective pattern in Proto-Semitic.

CaC:īC

Hebrew shows a large number of qualitative adjectives mostly related to meanings of "greatness" with this pattern *ʔabbir* "mighty", *ʔaddir* "powerful", *ʔammiṣ* "mighty", but also others such as *ṣaddiq* "just". Arabic likewise shows signs of this formation, which has shifted to CiC:īC, with qualitative adjectives, often with an iterative or intensive meaning: *sikkīt* "constantly silent", *ṣiddīq* "exceedingly truthful", *šikkīr* "drunken", *siḫḫīn* "very hot". Syriac has several examples of qualitative adjectives with this formation as well, e.g. *ḥakkim* "wise", *zaddiq* "just", *rawwiz* "happy". Fox (2003: 267) discusses the Akkadian CaC:īC under CaC:iC nouns, as they are generally orthographically indistinguishable.

CaC:ūC

Fox (2003: 271) identifies this pattern with qualitative adjectival meaning in all languages he discusses; some examples are: Akk. *šakku/ūru* "drunken"; Ar. *qaddūs* "all-holy", *qaʕʕūr* "deep"; Hebr. *ḥannun* "merciful", *ḥaddud* "sharp"; Syr. *ḥammuṣ* "acid, sour", *ʕammuṭ* "dark".

CaC:iC

Hebrew has a fair number of examples of qualitative adjectives of this pattern; many of them refer to bodily defects and other personal attributes, such as *ʔillem* "mute", *ʔiṭṭer* "crippled", *ʕiqqeš* "twisted", *gibben* "hump-backed", *ʕiwwer* "blind", *piqqeaḥ* "seeing well". No other branches give clear evidence for this formation, so it is doubtful that this pattern is reconstructible for Proto-Semitic. Patterns of CaC:uC do not seem to exist (Fox 2003: 253ff.).

CaCi/u/aC

*CaCiC is the regular verbal adjective formation. As such, *CaCiC is attested with qualitative, stative and passive meanings, especially in Akkadian. Qualitative meanings are attested in all branches, e.g. Akk. *labirum* "old"; Ar. *fariḥ* "happy", *ḥazin* "sad"; Hebr. *kåḇeḏ* "heavy", *zåqen* "old"; Syriac *greḇ* "leprous", *ḥḏeṯ* "new". Gəʕəz seems to show no evidence of verbal adjectives of this type at all (Fox 2003: 168).

*CaCuC is primarily used to create qualitative adjectives, and in this function is well attested throughout Semitic, e.g. Akk. *maruṣ* "sick", *rašub* "awesome"; Ar.

ʕağul "quick", *nadus* "intelligent"; Hebr. *ʕåmoq* (fem. *ʕămuqqå*) "deep". Syriac and Gəʕəz appear to have lost all traces of this pattern (Fox 2003: 174, 177).

*CaCaC is the rarest of these three patterns, but it is present in several branches as a qualitative adjective formation and it is especially well-attested in Hebrew (Fox 2003: 162), e.g. Akk. *waqar* "precious", *rapaš* "wide"; Ar. *ḥasan* "handsome", *baṭal* "courageous"; Hebr. *ḥåḏåš* "new", *yåråq* "green", *qåṭån* "little", *såḵål* "foolish". Evidence for this pattern is not clearly present in Syriac and Gəʕəz.

Table 13. The adjective stems of Semitic

*CaCaC	*CaCāC	–
*CaCiC	*CaCīC	*CaC:īC
*CaCuC	*CaCūC	*CăC:ūC

A summary of the stems

To sum up, Semitic, like Berber, forms adjectives by placing a short vowel **a* after the first root consonant. The second root consonant may or may not be lengthened, and the vowel after the second root consonant may be any vowel. However, lengthening of the root consonant does not clearly combine with short vowels, nor does it seem to combine with *ā*. The reconstructed adjectival stems are given in Table 13. Some adjectival patterns that do not belong to the possible stems are left out here. For example, the active participle CāCiC quite frequently has qualitative adjectival meaning in Arabic, e.g. *bārid* "cold", but Fox (2003: 237ff.) convincingly argues that this must be secondary, and that this participial formation originally did not apply to qualitative verbs.

Conclusion

The similarity between the formation of Berber and Semitic qualitative adjectives with the patterns CaCV̄C and CaC:V̄C, combined with the morphological similarity of the suffix conjugation they may receive, makes it highly likely that these patterns originally came from a single shared formation, in a shared ancestor that I call Proto-Berbero-Semitic here.

There is, however, also an important difference. Semitic can freely form deverbal adjectives from intransitive and transitive verbs, whereas Berber adjectives are not obviously deverbal and are exclusively qualitative. It is difficult to imagine the Semitic system to have been present in Proto-Berbero-Semitic and subsequently to have been lost completely in Proto-Berber. Instead, it seems more likely that the Semitic productive derivation of verbal adjectives is an innovation. It is likely this went through several steps. First, qualitative adjectives came to be associated with qualitative verbs (which either already existed, or are deadjectival). After this the verb/verbal adjective pairing that this caused was expanded, presumably first to intransitive verbs and ultimately to transi-

tive verbs, giving rise to the stative and passive adjectives that we find in Proto-Semitic.

The Proto-Berbero-Semitic situation and the subsequent development in Proto-Berber and Proto-Semitic can thus be described fairly easily from a basic qualitative adjectival system in Proto-Berbero-Semitic:

Proto-Berbero-Semitic

1. Qualitative adjectives are formed with *CaCV̄C, *CaC:V̄C (and perhaps also CaCV̆C).

2. Predicative adjectives[1] are marked by a suffix conjugation that agrees with the subject in person and gender.[2]

3. Deverbal stative and passive adjectives had not yet developed.

Table 14. Proto-Berber-Semitic adjectival formations

*CaCaC S[3]	*CaCāC B & S	*CaC:āC B
*CaCiC S (& B)	*CaCīC B & S	*CaC:īC B & S
*CaCuC S (& B)	*CaCūC B & S	*CaC:ūC B & S

Semitic

1. Semitic forms verb/verbal adjective pairs by associating qualitative verbs with the qualitative adjectives.

2. Adjectival stems develop a regular derivational deverbal adjective.

3. The use of deverbal adjectives is spread to intransitive verbs, and eventually to transitive verbs, giving rise to the Semitic G-stem stative and passive adjectives.

Berber

1. Berber uses the (mostly) intransitive *-iCCiC[4] verb class to form deadjec-

1. And perhaps also nouns, such as we find in Akkadian *šarr-āku* "I am king", as argued by Huehnergard (1987: 230).
2. Considering the difference marking in the plural in Berber and Semitic, the marking of the plural may be a later development.
3. Rössler (1950: 483) identifies the Proto-Berber *CăCaC pattern with the Semitic *CaCaC pattern, tern, while I identify it with the *CaCāC pattern. The very productive Berber verbal noun formation *a-CăCaC, widely recognized as related to the Semitic *CaCāC infinitive, gives strong evidence that Proto-Berber **a* in a final syllable corresponds to Proto-Semitic **ā*, whereas the Proto-Berber perfective stem *əCCăC (most likely related to the Semitic stative preterite *iCCaC) shows that Proto-Berber **ă* in a final syllable corresponds to Proto-Semitic **a*.
4. It should be noted here that the *-iCCiC class is probably not related to the Akkadian i-CCiC verb, as Kouwenberg (2010: 176f. n. 48) suggests. It is rather the aorist of basic triradical class *ăCCəC that should be associated with the Akkadian perfective, as convincingly argued by Kossmann and Suchard (2018) who reconstruct a Proto-Berbero-Semitic verbal system dynamic perfective *-*vprus/-vpris*; dynamic imperfective *-*vparras* and stative perfective *-*vpras*. As such it does not

tival qualitative verbs.

2. (Outside of Zenaga and At Ziyan) the semantic overlap between the stative sense of the perfective, e.g. **y-ăwriɣ* "it has become yellow" and the predicative adjective **wăraɣ* "it is yellow", causes the predicative adjective to be incorporated as a suppletive perfective stem of the verb.

The formations of the adjectival stems in Proto-Berber and Proto-Semitic are very similar, and its formation should be reconstructed for Proto-Berbero-Semitic. The biggest points of departure between the two systems are the possible absence of the *CaCV̆C stems in Proto-Berber, and the absence of *CaC:āC stems as a qualitative adjective formation in Semitic. Table 14 gives an overview of the reconstructible adjectival stems.

CCəC (< *CəCəC?): **a-ɣrəm* "village"
CCuC (< *CəCuC): **a-ɣyul* "donkey"
CCaC (< *CəCaC?): **a-gmar* "horse" (K ssmann 1999: 151–2)
CeCăC (< *CaCăC): **e-dekăl* < **a-dakăl* "foot sole" [1]
CuCiC: **a-gugil* "orphan" (Kossmann 1999: 150, 227)
CuCaC: **a-zulaɣ* "goat" (Taine-Cheikh 2008: 627n1138)
CaCiC: **a-maziɣ* "Berber; free person"

It is important to note here that both Berber and Semitic have quite severe stem-shape restrictions. For both language families, other possible stem shapes could be imagined for adjectives, but simply do not show up. For Semitic, this is true for all three CvCC stems (CaCC, CiCC, CuCC),[2] and reconstructible stems that have a high vowel in the initial syllable (CuCuC, CuCūC, CuCaC, CuCāC, CuC̄uC, CuC̄ūC, CiCaC, CiCāC), and probably also the CāCiC pattern, which was originally restricted to active participles (Fox 2003, esp. 291–6).

Berber likewise has many nominal stems which do not have any adjectival value in stem shapes other than the ones discussed above. Some examples are given below, with several easily reconstructible Proto-Berber nouns as examples:[3]

The fact that neither Semitic nor Berber has adjectives in these other possible stem shapes, while both share the similarity that adjectives are formed with a **CaC(:)V̄/V̆C* pattern, is most likely explained through shared inheritance, rather than a chance correspondence.

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follow that the qualitative verbs go back to the Berbero-Semitic period as suggested by Kouwenberg. The fact that Berber and Semitic employ clearly different verbal formations for the qualitative verbs rather argues for the association of a qualitative verb besides the qualitative adjective being a parallel innovation in both branches.

1. For a discussion on the reconstruction of this noun, see Van Putten (2018b: 18).

2. An exception to this seems to be Arabic, which has several geminate and weak roots with CuCC adjectives: *murr* "bitter", *ḥurr* "free", *ḥulw* "sweet" (Fox 2003: 151). Considering the rarity of this pattern even in Arabic, it does not seem to be reconstructible for Proto-Semitic.

3. This overview excludes any Proto-Berber patterns that are certainly quadriradical, of which there are significantly more than one would reconstruct for Proto-Semitic.

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